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DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Resources and Services Administration

Criteria for Determining Maternity Care Health Professional Target Areas

AGENCY: Health Resources and Services Administration (HRSA), Department of Health and Human Services (HHS).

ACTION: Request for Public Comment.

SUMMARY: In accordance with the requirements of the Public Health Service Act, HRSA, authorized by the Secretary of HHS, shall establish the criteria which will be used to determine maternity care health professional target areas (MCTAs) in existing primary care Health Professional Shortage Areas (HPSAs). This notice sets forth the proposed criteria which will be used to identify and score MCTAs.

DATES: Submit written comments no later than **[INSERT DATE 60 DAYS AFTER PUBLICATION DATE].**

ADDRESSES: Written comments should be submitted to SDMP@hrsa.gov.

FOR FURTHER INFORMATION CONTACT: Dr. Janelle McCutchen, Chief, Shortage Designation Branch, Division of Policy and Shortage Designation, Bureau of Health Workforce, HRSA, 5600 Fishers Lane, Rockville, Maryland 20857, (301) 443-9156.

SUPPLEMENTARY INFORMATION: Section 332 of the Public Health Service Act, 42 U.S.C. § 254e, provides that HRSA shall designate HPSAs based on criteria established by regulation. HPSAs are defined in section 332 to include (1) urban and rural geographic areas which HRSA determines have shortages of health professionals, (2) population groups with such shortages, and (3) public or private medical facilities or other public facilities with such

shortages. The required regulations setting forth the criteria for designating HPSAs are codified

at 42 C.F.R. Part 5.

Section 332(k)(1) provides that HRSA shall identify shortages of maternity care services

"within health professional shortage areas." Section 332(k)(1) further requires HRSA to identify

MCTAs and distribute maternity care health professionals within HPSAs using the MCTAs so

identified. HRSA must also collect and publish data in the **Federal Register** comparing the

availability and need of maternity care health services in HPSAs and must seek input from

relevant provider organizations and other stakeholders.

HRSA sought input regarding MCTA scoring from relevant stakeholders via a Request

for Information issued in May 2020. HRSA received 24 comments from a variety of

stakeholders, including State Primary Care Offices, Indian tribes, Federally Qualified Health

Centers, and women's health and public health advocacy groups. The comments addressed a

wide range of maternity care concerns, including social determinants of health that impact

maternal health outcomes, women's access to prenatal care, prevalence of chronic disease,

maternity care health professional provider types to be included in MCTAs, and the maternity

care needs of women in rural areas and among tribes and Alaska natives. Several commenters

also provided suggestions on data sources that HRSA could use to calculate MCTA scores.

HRSA has carefully reviewed and considered all of the feedback provided. HRSA

proposes the following MCTA scoring criteria, which will be used to distribute certain currently

eligible National Health Service Corps (NHSC) clinicians who provide maternity care services.

This includes obstetrician gynecologists (OB/GYNs) and certified nurse midwives (CNMs). The

statute does not expand discipline eligibility for participation in the NHSC to health

professionals who are not already eligible for the NHSC. *See* section 332(k)(1).

Approach for Determining Maternity Care Health Professional Target Areas of Greatest

Shortage

A MCTA score will be generated for each primary care HPSA using the HPSA's service area. The following six scoring criteria will be included in a composite scale that will be used to identify MCTAs with the greatest shortage of maternity care health professionals: (1) ratio of females ages 15 – 44 -to-full time equivalent maternity care health professional ratio; (2) percentage of females 15 – 44 with income at or below 200 percent of the federal poverty level (FPL); (3) travel time and distance to the nearest provider location with access to comprehensive maternity care services ; (4) fertility rate; (5) the Social Vulnerability Index; and (6) four maternal health indicators (pre-pregnancy obesity, pre-pregnancy diabetes, pre-pregnancy hypertension, and prenatal care initiation in the first trimester). Each of these six criteria will be assigned a relative weight based on the significance of that criteria relative to all the others.

The weighted scores will be summed to develop a composite MCTA score ranging from zero to 25, with 25 indicating the greatest need for maternity care health professionals in the MCTA. Accordingly, the higher the composite score, the higher the degree of need for maternity care health services.

Score for population-to-full-time-equivalent maternity care health professional ratio:

HRSA is seeking public comment on the proposed approach to measuring the ratio of females ages 15 – 44 -to-full time equivalent (FTE) maternity care health professional, as HRSA received overwhelmingly positive stakeholder feedback indicating that HRSA should consider the population-to-provider ratio as a component of the MCTA score. Accordingly, population-to-provider ratio will measure the number of women of childbearing age in the service area compared to the number of maternity care health professionals in the service area. The population-to-provider ratio continues to be a cornerstone in measuring the availability of primary care resources within a particular area. Based on the available literature and recommendations received, for purposes of MCTA scoring, women of childbearing age will be defined as women between the ages of 15-44 years old and maternity care professionals will be

defined as Obstetrician/Gynecologists and Certified Nurse Midwives (CNMs).[1] A population-to-provider ratio of 1500:1 will be used as a minimum requirement for a population to be considered reasonably served by Obstetrician/Gynecologists and CNMs.[2]

Based on comments received, research, and consultation with stakeholders, HRSA did not include General Surgeons, Anesthesiologists, Pediatricians, Doulas, and Lactation Specialists into the provider portion of the population-to-provider ratio for MCTA scoring, as these providers do not typically provide full-scope comprehensive maternity care. Additionally, HRSA considered including Family Medicine Physicians, Physician Assistants, Advance Practice Registered Nurses, and Registered Nurses who provide Women's Health services or obstetric care into the provider portion of the population-to-provider ratio for MCTA scoring. With respect to Family Medicine Physicians, research shows that family medicine practitioners offering maternity care services has been in decline in recent years, and data demonstrating how much time these providers spend providing maternity care services is not readily available.

Rayburn, Petterson, and Phillips conducted an observational study from 2003 to 2010 in which they examined the proportion of Family Physicians who perform deliveries.[3] The proportion of Family Physicians performing deliveries declined by 40.6 percent, from 17.0 percent in 2003 to 10.1 percent in 2009, with deliveries being more common in nonmetropolitan areas. The researchers concluded that the proportion of Family Physicians performing deliveries continues to decline with most delivering Family Physicians performing 25 or fewer deliveries per year. In another study, Makaroff, et al., evaluated factors that are contributing to the decline of Family Physicians providing maternity care.[4] Makaroff, et al. evaluated American Board of

[1] Johantgen, M. et al. "Comparison of Labor and Delivery Care Provided by Certified Nurse-Midwives and Physicians: A Systematic Review, 1990 to 2008." *Women's Health Issues*, vol. 22, no. 1 (2012): e73-e81, doi: 10.1016/j.whi.2011.06.005.

[2] Rayburn, W. F. et al. "Distribution of American Congress of Obstetricians and Gynecologists Fellows and Junior Fellows in Practice in the United States." *Obstet Gynecol*, vol. 119, no. 5 (2012): 1017, doi: 10.1097/AOG.0b013e31824cfe50.

[3] Rayburn, William F, Stephen M Petterson, and Robert L Phillips. "Trends in Family Physicians Performing Deliveries, 2003-2010." *Birth (Berkeley, Calif.)* 41.1 (2014): 26–32

[4] Makaroff, Laura A. et al. "Factors Influencing Family Physicians' Contribution to the Child Health Care Workforce." *Annals of family medicine* 12.5 (2014): 427–431.

Family Medicine survey data collected from every family physician during application for the Maintenance of Certification Examination to determine the percentage of family physicians that provided maternity care from 2000 to 2010. This research team's findings are in line with the results of the research conducted by Rayburn, Petterson, and Phillips in that they also found that maternity care provision by family physicians declined from 23.3 percent in 2000 to 9.7 percent in 2010 ($p < 0.0001$). Furthermore, in 2018, a study from Goldstein, et al. shows that the percentage of family practitioners offering low and high volume maternity care services continues to decline in both the United States and Canada and is now at less than 5 and 1 percent, respectively. These findings are based on data from the American Board of Family Medicine Examination questionnaires. The data specifically showed that the number of family practitioners who offered high volume obstetric services has declined by 50 percent since 2009.[5]

Thus, while family physicians continue to play an important role in providing maternity care in many parts of the United States, there is a documented decline in the percentage of family physicians providing maternity care. HRSA recognizes the important contribution all of these professionals play in the delivery of obstetric care. However, as there is also not currently detailed nationwide data readily available outlining the number of hours individual providers provide these services, HRSA did not have an analytical basis for how to include them consistently. HRSA will continue to review the availability of these data points to determine if additional provider types (particularly Family Medicine Physicians, but also including General Surgeons, Anesthesiologists, Pediatricians, Doulas, Lactation Specialists, Physician Assistants, Advance Practice Registered Nurses, and Registered Nurses who provide Women's Health services) may be incorporated into the MCTA scoring criteria in the future. HRSA is especially interested in recommendations for how to determine the amount of time Family Medicine Physicians spend providing maternity care services, as they may be the only providers of

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[5] Goldstein, Jessica, et al., "Supporting Family Physician Maternity Care Providers" *Family Medicine* 50:9 (2018).

maternity services in areas with no OB/GYNs or CNMs. HRSA welcomes comments on how to incorporate these providers into future iterations of MCTA scoring, and any detailed nationwide data that may be available to do so.

HRSA is seeking feedback on the assigned point values in the distribution, which are proposed to be as follows:

Population-to-Provider Ratio	Points
Ratio ≥ 6,000:1, or No CNMs or OB-GYNs and Population (Pop) ≥ 500	5 Points
6,000:1 > Ratio ≥ 5,000:1, or No CNMs or OB-GYNs and Pop ≥ 400	4 Points
5,000:1 > Ratio ≥ 3,000:1, or No CNMs or OB-GYNs and Pop ≥ 300	3 Points
3,000:1 > Ratio ≥ 2,000:1, or No CNMs or OB-GYNs and Pop ≥ 200	2 Points
2,000:1 > Ratio ≥ 1,500:1, or No CNMs or OB-GYNs and Pop ≥ 100	1 Point
Ratio < 1,500:1, or No CNMs or OB-GYNs and Pop < 100	0 Points

Score for percentage of population with income at or below 200 percent of the federal poverty level:

HRSA proposes to incorporate poverty data from the U.S. Census Bureau into the MCTA composite score, as the majority of commenters highlighted the disparities that women living in poverty face in accessing necessary maternity health services. The percentage of people living in the service area at or below 200 percent of the FPL will be used to score MCTAs, based on recommendations from commenters and poverty data from the U.S. Census Bureau. Maternal health literature demonstrates a high correlation between low income, low health status, and poor maternal health outcomes.[6]

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[6]Aftab., et al. "Effects of Poverty on Pregnant Women." *Department of Gynae and Obstetrics, Dow University of Health Sciences, Lyari General Hospital, Karachi*, vol. 51, no.1 (2012).
 March of Dimes, "Nowhere to Go: Maternity Care Deserts Across the US," (2018), available at <https://www.marchofdimes.org/materials/Nowhere_to_Go_Final.pdf>.

HRSA is seeking feedback on the assigned point values in the distribution, which are proposed as follows:

Population with Income at or Below 200% FPL Ratio	Points
Percentage of population with income at or below 200% FPL ≥ 55%	6 points
55% > Percentage of population with income at or below 200% FPL ≥ 50%	5 Points
50% > Percentage of population with income at or below 200% FPL ≥ 45%	4 Points
45% > Percentage of population with income at or below 200% FPL ≥ 40%	3 Points
40% > Percentage of population with income at or below 200% FPL ≥ 35%	2 Points
35% > Percentage of population with income at or below 200% FPL ≥ 30%	1 Point
Percentage of population with income at or below 200% FPL < 30%	0 Points

Score for Travel distance/time to nearest source of accessible care outside of the MCTA:

Several of the commenters highlighted the barriers in travel time and transportation that many women face in accessing maternity care services, particularly in rural and underserved areas. In keeping with this feedback, HRSA will incorporate the travel time and distance to the Nearest Source of Care into the MCTA composite score. The Nearest Source of Care is defined as the closest provider location where the residents of the area or designated population have access to comprehensive maternity care services. Scientific literature presented by the American Academy of Pediatrics Committee on Fetus and Newborn and the American College of

Obstetricians and Gynecologists Committee on Obstetric Practice established that an individual's proximity to care can affect health outcomes.[7] Specifically for maternity care, the literature indicates that decision-to-incision time for emergency cesarean delivery is 30 minutes.[8]

HRSA is seeking public comment on the assigned point values in the distribution, which are proposed as follows:

Travel Time and Distance	Points
Time ≥ 105 min or Distance ≥ 105 miles	6 points
105 min > Time ≥ 90 min or 105 miles > Distance ≥ 90 miles	5 points
90 min > Time ≥ 75 min or 90 miles > Distance ≥ 75 miles	4 Points
75 min > Time ≥ 60 min or 75 miles > Distance ≥ 60 miles	3 Points
60 min > Time ≥ 45 min or 60 miles > Distance ≥ 45 miles	2 Points
45 min > Time ≥ 30 min or 45 miles > Distance ≥ 30 miles	1 Point
Time < 30 min and Distance < 30 miles	0 Points

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[7] Kilpatrick, Sarah J., et al. *Guidelines for Perinatal Care*. 8th ed., American Academy of Pediatrics, 2017.
[8] Roa, Lina et al., "Travel Time to Access Obstetric and Neonatal Care in the United States." *Obstetrics and Gynecology* (New York. 1953) vol. 136, no. 3 (2020): 610–612.

Score for Fertility Rate

HRSA proposes to include fertility rate as a criteria for the MCTA score to reflect the increased need for maternity care services among populations which experience a higher rate of births. Women of childbearing age will be derived from the American Community Survey and births will be derived from the National Vital Statistics System.

HRSA is seeking public comment on the assigned point values in the distribution, which are proposed as follows:

Fertility Rate	Points
Fertility Rate ≥ 90th Percentile	2 Points
90th Percentile > Fertility Rate ≥ 50th Percentile	1 Point
Fertility Rate < 50th Percentile	0 Points

Score for Social Vulnerability Index

Several MCTA commenters highlighted associations between adverse maternal health outcomes and non-clinical factors such as poverty, unemployment, lack of adequate housing and transportation, minority status, and English language proficiency. The Agency for Toxic Substances and Disease Registry's Geospatial Research, Analysis and Services Program within the Centers for Disease Control and Prevention (CDC) created databases to help emergency response planners and public health officials identify and map communities that will most likely need support before, during, and after a hazardous event. Per the CDC, Social Vulnerability refers to the resilience of communities when confronted by external hazards such as natural or human-caused disasters, or disease outbreaks.

One such database is the Social Vulnerability Index (SVI), which uses U.S. Census data to determine the social vulnerability of every census tract based on the following four themes:

socioeconomic status, household composition and disability, minority status and language, and housing type and transportation. Each tract receives a separate percentile ranking which is represented by a number between zero and one for each of the four themes, as well as an overall ranking. These themes take into account various factors ranging from educational attainment and unemployment to multi-unit structures and single parent households.

Public health literature supports the correlation between low English proficiency and late initiation of prenatal care as well as adverse perinatal outcomes due to lack of communication between the provider and patient.[9,10] Currently, literature is not available that evaluates the use of the entire SVI to specifically quantify maternal health outcomes. However, many of the individual factors within the SVI are known social determinants of health. Social determinants of health are the conditions in the environment in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. These social determinants of health as represented within the SVI, are critical in understanding external factors that affect the need for maternity care services.

A score for overall social vulnerability will be incorporated into the MCTA composite score to reflect the increased need for maternity care services among populations which experience a higher rate of social vulnerability using the CDC's SVI. HRSA is seeking public comment on the assigned point values in the distribution, which are proposed as follows:

Social Vulnerability Index	Points
Social Vulnerability ≥ 75th Percentile	2 Points
75th Percentile > Social Vulnerability ≥ 50th Percentile	1 Point

[9] Pope, Charlene. "Addressing Limited English Proficiency and Disparities for Hispanic Postpartum Women." *Journal of Obstetric, Gynecologic & Neonatal Nursing*, vol. 34, no. 4, 2005, pp. 512–20. *Crossref*, doi:10.1177/0884217505278295.

[10] Vinson, Abigail, et al. "131: Maternal Language, Severe Maternal Morbidity and Access to Prenatal Care." *American Journal of Obstetrics and Gynecology*, vol. 222, no. 1, 2020, pp. S99-100. *Crossref*, doi:10.1016/j.ajog.2019.11.147.

Social Vulnerability < 50th Percentile	0 Points

Score for Maternal Health Indicators

Many of the comments HRSA received raised concerns about social determinants of health that have an impact on women's health outcomes, not only during and after pregnancy, but also before and in between pregnancies. In order to address these concerns, HRSA is seeking public comment on the use of maternal health indicators as scoring criteria for MCTAs. MCTA scores will consider health indicators that are associated with poor maternal health outcomes by looking at various data points related to pre-pregnancy health status and when prenatal care began. Scores will consider pre-pregnancy obesity, diabetes, and hypertension, as well as whether prenatal care began in the first trimester, as these are all conditions which may require additional workforce capacity to adequately address community needs. Only women of childbearing age will be considered for these indicators. HRSA will use the National Vital Statistics System as the data source to determine the sub-score for each of these four (4) maternal health indicators.

Public health literature demonstrates that higher rates of obesity, diabetes, or hypertension, and later onset of prenatal care are all associated with poorer maternal health outcomes and will help identify the need for additional health professionals. A 2018 Centers for Disease Control and Prevention report on preconception health surveillance identified priority indicators for adverse maternal health outcomes.[11] The study reviewed 50 preconception health indicators and prioritized those indicators that are most suitable for surveillance purposes. Weight, diabetes, and hypertension were all among the top 10 preconception health indicators recommended for surveillance.[12]

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[11] Robbins, Cheryl L., et al. "Preconception Health Indicators for Public Health Surveillance." *Journal of Women's Health*, vol. 27, no. 4 (2018): 430–43.
[12] *Ibid.*

HRSA also considered incorporating maternal mortality data into the MCTA score. However, due to data suppression for privacy reasons, this data is not readily available publicly or to HRSA below the state level. As both HPSAs and MCTAs are designed to be able to provide meaningful differentiation of need between communities at a local level, HRSA decided not to incorporate maternal mortality data at this time. If this data eventually becomes available to HRSA at the county level or below, HRSA may include it in future MCTA score calculation.

HRSA is seeking public comment on the proposed criteria and point scale distributions below. Service areas may receive one point each for meeting the criteria.

- **Pre-pregnancy obesity**

    Pre-pregnancy obesity is defined as having a Body Mass Index of 30 or higher. One point will be awarded if the prevalence of pre-pregnancy obesity in the area is greater than or equal to the 75th percentile among all counties in the United States. If the prevalence of pre-pregnancy obesity in the area is less than the 75th percentile among all counties, zero points will be awarded.

Pre-Pregnancy Obesity	Points
Prevalence of pre-pregnancy obesity ≥ 75th percentile	1 Point
Prevalence of pre-pregnancy obesity < 75th percentile	0 Points

- **Pre-pregnancy diabetes**

    One point will be awarded if the prevalence of pre-pregnancy diabetes in the area is greater than or equal to the 75th percentile among all counties in the United States. If the prevalence of pre-pregnancy diabetes in the area is less than the 75th percentile among all counties, zero points will be awarded.

Pre-Pregnancy Diabetes	Points
Prevalence of pre-pregnancy diabetes ≥ 75th percentile	1 Point
Prevalence of pre-pregnancy diabetes < 75th percentile	0 Points

- **Pre-pregnancy hypertension**

    One point will be awarded if the prevalence of pre-pregnancy hypertension among women in the area is greater than or equal to the 75th percentile among all counties in the nation. If the prevalence of pre-pregnancy hypertension among women in the area is less than the 75th percentile among all counties, zero points will be awarded.

Pre-Pregnancy Hypertension	Points
Prevalence of pre-pregnancy hypertension ≥ 75th percentile	1 Point
Prevalence of pre-pregnancy hypertension < 75th percentile	0 Points

- **Prenatal care initiation in the 1st trimester**

    One point will be awarded if the prevalence of women who did not initiate prenatal care in the first trimester of their pregnancy is greater than or equal to the 75th percentile among all counties in the nation. Zero points will be awarded if the prevalence of women who did not initiate prenatal care in the first trimester of their pregnancy is less than the 75th percentile among all counties.

Prenatal Care in First Trimester	Points
Prevalence of No Prenatal Care in First Trimester ≥ 75th percentile	1 Point

Prevalence of No Prenatal Care in First Trimester $< 75^{th}$ percentile	0 Points

Diana Espinosa,

Acting Administrator.

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